

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Revision of the Commission's Rules To Ensure	)	CC Docket No. 94-102
Compatibility with Enhanced 911 Emergency	)	
Calling Systems	)	
	)	
Petition of City of Richardson, Texas	)	FCC 01-293
_____	)	

**SPRINT PCS REPLY COMMENTS IN SUPPORT OF ITS  
PETITION FOR RECONSIDERATION AND CLARIFICATION**

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January 28, 2002

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## Summary

Sprint PCS and the Public Safety Organizations (APCO, NENA and NASNA) have common positions on three of the four issues that Sprint PCS raised in its reconsideration and clarification petition:

1. Sprint PCS agrees with the Public Safety Organizations' proposal that the implementation period not be tolled unless a PSAP does not supply supporting documentation within 15 days of the carrier's request.
2. The parties agree that ILECs should be required to publish their Phase II ALI database upgrade schedule.
3. Sprint PCS is not opposed to the Public Safety Organization's proposal to address non-standard installations on an exception, "case-by-case basis," based on their belief that the number of "customized" installations will be few.

Sprint PCS encourages the Commission to adopt these three common positions.

There is a divergence of opinion on the fourth issue — namely, the need for a "refresh" capability. Although the Public Safety Organizations "acknowledge that the refreshment capability . . . may be an obvious choice," they oppose a requirement that a valid Phase II request include this capability.

The Sprint PCS Rhode Island Phase II installation has revealed that the caller's location information generally will not be available for eight-to-20 seconds. PSAP call-taker equipment, however, is generally designed to request the location information from the ALI within approximately three-to-five seconds after the E911 call is dialed. What this means as a practical matter is that, in the majority of cases, PSAPs will not receive the caller's true location unless the ALI database has been upgraded to contain a "refresh" capability. Instead, PSAPs that have deployed Phase II will receive, in response to the initial query, information representing a default centroid location associated with the cell sector from which the call originated. Because this default information will appear as a series of x,y coordinate digits in the latitude/longitude format, call-takers may erroneously believe that the data they see is the caller's true location. Thus, without a refresh capability (or alternatively, receipt of a confidence factor), PSAPs may mistakenly believe that they are sending emergency response personnel to the caller's exact location.

The Commission recently announced its intention to engage the services of Mr. Hatfield to investigate the important subject of E911 implementation. The refresh issue is important and Sprint PCS believes that the Commission has the necessary information to confirm the need for refresh capability. However, if the Commission still has questions on this issue, it should charge Mr. Hatfield with pursuing this matter so it can have the benefits of his recommendations.

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Sprint Spectrum L.P. d/b/a Sprint PCS ("Sprint PCS"), submits these reply comments in support of its petition for reconsideration and clarification of the *Richardson Order*.<sup>1</sup> Sprint PCS believes that there is considerable agreement between its position and that taken by the Public Safety Organizations.<sup>2</sup> Indeed, Sprint PCS and the Public Safety Organizations generally agree on three of the four issues raised in Sprint PCS' petition, and the difference on the fourth issue may be attributable to the fact that Sprint PCS was able to glean important information from its initial Phase II deployment in Rhode Island.

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<sup>1</sup> See *Public Notice*, "Wireless Telecommunications Bureau Seeks Comment on Petitions for Reconsideration Regarding Public Safety Answering Point Requests for Phase II Enhanced 911," CC Docket No. 94-102, DA 01-2855 (Dec. 12, 2001).

<sup>2</sup> The Public Safety Organizations include the Association of Public-Safety Communications Officials-International, Inc. ("APCO"), the National Emergency Number Association ("NENA"), the National Association of State Nine One One Administrators ("NASNA"), and Tarrant County, Texas 9-1-1 District.

**I. SPRINT PCS AGREES WITH THE TOLLING PERIOD PROPOSAL MADE BY THE PUBLIC SAFETY ORGANIZATIONS**

In its petition, Sprint PCS asked the Commission to confirm that the six-month implementation period is tolled while a PSAP assembles its supporting documentation.<sup>3</sup> In response, the Public Safety Organizations recommend that “the six month period continue running upon a carrier request for documentation, unless the PSAP fails to provide the requested documents within a reasonable time frame (e.g., 15 days), after which the six month period will toll.”<sup>4</sup>

This “tolling after 15 days” proposal has merit. It is reasonable, practical, and workable. Accordingly, Sprint PCS encourages the Commission to adopt this Public Safety Organization proposal. Deferring the commencement of tolling to 15 calendar days following a carrier request appropriately balances the interests of both PSAPs and carriers.

**II. SPRINT PCS AND THE PUBLIC SAFETY ORGANIZATIONS AGREE THAT INCUMBENT LECs SHOULD BE REQUIRED TO PUBLISH THEIR ALI DATABASE UPGRADE SCHEDULE**

As Sprint PCS indicated in its petition, PSAPs will not receive Phase II data until the ALI databases are upgraded to accommodate Phase II.<sup>5</sup> Neither PSAPs nor carriers benefit by undertaking their respective portion of a Phase II conversion if the ALI database is not upgraded at the same time. Sprint PCS therefore asked that the Commission either (a) clarify that a valid Phase II request must include documentation that the PSAP’s ALI database will be upgraded to Phase II within six months of the request, or (b) require incumbent local exchange carriers

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<sup>3</sup> See Sprint PCS Reconsideration Petition at 12-13.

<sup>4</sup> Public Safety Organizations Comments at 4. The FCC should reject Richardson’s proposal – the imposition of “a substantial financial penalty” on carriers that challenge requests that PSAPs are able to later document (Opp. at 4). Of course, the best option is for the PSAP to include the documentation with the request itself. The important objective is to ensure that the PSAP will actually benefit from Phase II implementation and that carriers focus their implementation efforts on those PSAPs that will be Phase II compatible within six months of their requests.

<sup>5</sup> See Sprint PCS Reconsideration Petition at 3-6.

(“ILECs”) operating ALI databases to publish their Phase II conversion schedule.<sup>6</sup> While Sprint PCS believes that the second approach, requiring publication, would be most efficient for all involved parties, it stated that it “will defer to the views of the public safety community over which approach they prefer.”<sup>7</sup>

The Public Safety Organizations responded by taking the position that the “better approach” is to require ILECs to publish their Phase II database upgrade schedule:

That will provide both carriers and PSAPs with a far more efficient mechanism for obtaining necessary information regarding upgrades.<sup>8</sup>

Given the Commission’s determination that PSAPs are responsible for the ALI databases,<sup>9</sup> it would clearly be inappropriate to require wireless carriers to obtain upgrade schedules from ILECs directly. Wireless carriers cannot compel ILECs to share their ALI database upgrade schedules with them.

The Verizon telephone companies alone oppose the ILEC publication proposal. They assert (in a single paragraph) that such a step is “unnecessary” because a PSAP’s “certification that it will be ready on a given date necessarily means that it has made the needed arrangements for the ALI upgrade.”<sup>10</sup> But as the Public Safety Organizations point out, “the provision of LEC upgrades is largely beyond the control of PSAPs,” and requiring each PSAP to obtain “documentation of upgrade schedules may thus be an unnecessary burden.”<sup>11</sup>

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<sup>6</sup> See *id.* at 6-7.

<sup>7</sup> *Id.* at 7.

<sup>8</sup> Public Safety Organizations Comments at 2.

<sup>9</sup> See King County Letter (May 9, 2001).

<sup>10</sup> Verizon Comments at 1.

<sup>11</sup> Public Safety Organization Comments at 2.

It bears emphasis that ILECs would face no burden in publishing their ALI database upgrade schedules, given that they already possess the information to publish a list — namely, the identity of their ALI databases, the projected date each database will be upgraded to Phase II, and the identity of the PSAPs served by each database. Sprint PCS therefore urges the Commission to adopt the Public Safety Organizations' recommendation to require ILECs to publish Phase II conversion schedules for ALI databases they operate.

Sprint PCS does not understand, however, the Public Safety Organizations' statement that LEC publication "should not . . . alter the basic obligation of carriers to respond to a PSAP request, so long as the PSAP can document that a database upgrade request has been submitted to the relevant LEC."<sup>12</sup> It is the database upgrade itself, not the submission of the upgrade request to the LEC, that will allow Phase II to become activated. Neither PSAPs nor carriers benefit by undertaking work that would provide no real value to public safety or the calling public. It is time for PSAPs to acknowledge that a Phase II system can become operational only when all three components — PSAP CPE, carrier networks, and the PSAP's E911 network — are all upgraded and tested.

Sprint PCS further concurs with the Public Safety Organization's additional recommendation that the Commission give "priority . . . to the quality and timeliness of LEC participation in wireless E9-1-1 implementation."<sup>13</sup> Sprint PCS has advised the Commission of BellSouth's announcement that it has no plans to upgrade the ALI databases that it operates,<sup>14</sup> and other par-

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<sup>12</sup> *Id.*

<sup>13</sup> *See id.* at 3 n.3.

<sup>14</sup> *See* Carrier Notification from Jim Brinkley, Senior Director, BellSouth Interconnection Services, to Wireless Carriers, SN9182565 (Aug. 13, 2001), *appended as* Exhibit 2 to Sprint PCS Reply Comments and Further Supplemental Report, Docket No. 94-102 (Sept. 4, 2001).

ties have advised the Commission of Qwest's announcement that it will be two-to-four years before its ALI databases will become Phase II capable.<sup>15</sup>

Despite the best efforts of PSAPs and wireless carriers, the fact remains that there will be no Phase II E911 service without the timely participation of the ILECs. As VoiceStream correctly observes, "[f]or all practical purposes, the ALI database is a 'bottleneck' – PSAPs will not receive the Phase II data elements that carriers generate unless the ALI database is Phase II compatible."<sup>16</sup>

**III. SPRINT PCS IS NOT OPPOSED TO THE PUBLIC SAFETY ORGANIZATIONS' PROPOSAL ON THE STANDARDIZATION ISSUE – ALTHOUGH THE COMMISSION SHOULD ISSUE A SUITABLE ADVISORY TO PSAPs CONCERNING USE OF CUSTOMIZED SOLUTIONS**

The Commission in its *Richardson Order* recognized that it was "necessary" to use a common interface between carriers and E911 networks, but it declined to require use of the E2 interface standard that industry and the public safety community jointly developed.<sup>17</sup> Sprint PCS noted in its petition that carriers are deploying Phase II solutions that comply with the E2 standard,<sup>18</sup> and it is unclear whether a non-standard, customized E911 network Phase II solution would even be capable of working with a carrier network utilizing the standard E2 interface.<sup>19</sup> Sprint PCS further indicated that even if a customized interface were technically possible, such an arrangement would necessarily take longer to implement than a standardized arrangement, thereby undermining the Commission's objective to facilitate rapid deployment of operational

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<sup>15</sup> See VoiceStream Reply Comments, Docket No. 94-102, at 2 (May 3, 2001).

<sup>16</sup> VoiceStream Comments at 3.

<sup>17</sup> See *Richardson Order*, FCC 01-293, at n.31 and ¶ 19 (Oct. 17, 2001).

<sup>18</sup> See also Nextel Comments at 4 ("Like Sprint, Nextel's Phase II network has been designed to accommodate the E2 interface."); VoiceStream Comments at 6 ("[M]ost carriers have been implementing the E-2 interface standards in their networks.").

<sup>19</sup> See, e.g., VoiceStream Comments at 7.

E911 systems.<sup>20</sup> Sprint PCS therefore recommended in its petition that the Commission either (a) mandate the E2 interface, or (b) give carriers additional time to implement those customized arrangements that are technically feasible.<sup>21</sup>

In response, the Public Safety Organizations recognize that “standardization is a necessary element of Phase II implementation,” and they further acknowledge that carriers will likely need more time to install those customized interfaces that are technically feasible.<sup>22</sup> They nonetheless believe that the “number of ‘customized’ installations will be few,” and they therefore recommend that the Commission handle this subject on an exception, “case-by-case basis.”<sup>23</sup>

Sprint PCS is not opposed *per se* to the proposed “case-by-case” approach for dealing with customized installations based upon the Public Safety Organizations’ representation that the number of such instances will be small and given their recognition that non-standard solutions may take longer to implement than standards-compliant solutions.<sup>24</sup> Nevertheless, Phase II technologies can be complicated, even PSAPs that have been active in Phase II proceedings experience difficulty in recognizing the steps that must be undertaken for an operational Phase II system. Sprint PCS is concerned that less than fully informed PSAPs may purchase equipment or

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<sup>20</sup> See also North Dakota Network Comments at 5 (“[A] standard solution would simplify the implementation process greatly, especially for small and rural operators. . . . Such a [customized] solution would be wasteful and would deplete the scarce resource of the smaller carriers.”); VoiceStream Comments at 6-7 “[I]t will likely be very difficult and expensive . . . to accommodate a grab bag of different interfaces in various localities. The custom engineering work required to implement unique implementation solutions would make it extremely difficult for carriers to meet the six month deployment timeline.”).

<sup>21</sup> See Sprint PCS Reconsideration Petition at 9-10.

<sup>22</sup> See Public Safety Organizations Comments at 3.

<sup>23</sup> See *id.*

<sup>24</sup> The difficulty with addressing this subject on a case-by-case basis is that some PSAPs may think that customized installations can always be implemented within six months, generating controversy at the very time that PSAP-carrier cooperation is so important. Sprint PCS’ preference would be to establish timelines at the time the customized request is made, but it will work with PSAPs in all events.

order ALI database modifications that cannot be used because they are incompatible with the standardized Phase II solutions utilized by carriers.

No one benefits by the economic waste and delays that would occur in the purchase of incompatible components. Accordingly, if the Commission adopts the “case-by-case” approach recommended by the Public Safety Organizations, it should at minimum issue an advisory in its order so PSAPs realize the risks and delays associated with pursuing a non-standardized approach. However, the Commission should reemphasize the need for standardization to avoid delays in implementation and it should permit carriers additional time to implement Phase II if the PSAP uses a customized arrangement.

**IV. THE RHODE ISLAND EXPERIENCE CONFIRMS THAT PSAPs WILL NOT RECEIVE THE CALLER’S LOCATION INFORMATION IF E911 NETWORKS DO NOT INCLUDE A “REFRESH” CAPABILITY**

The Commission has recognized that “Phase II requires an additional upgrade to the ALI database so that it will query the Mobile Positioning Center (MPC) *at the appropriate time* to acquire the Phase II latitude/longitude data.”<sup>25</sup> To remove any ambiguity and further controversy if a PSAP pursues a non-standard arrangement, Sprint PCS asked that the Commission confirm that customized solutions must at minimum have the capability to (a) “pull” Phase II data from carrier MPCs and (b) make subsequent queries to the MPC if the Phase II data is not available at the time of the first inquiry.<sup>26</sup>

The Public Safety Organizations do not question the need for all ALI databases, including those using non-standard solutions, to have a “pull” capability. However, they ask the Commission to deny the Sprint PCS request as applied to the “re-query” or “refresh” capability:

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<sup>25</sup> *Richardson Order* at ¶ 17 (emphasis added).

While we acknowledge that the refreshment capability specified in J-STD-036 may be an obvious choice in most cases, we hesitate to stifle customization or to freeze technology.<sup>27</sup>

Sprint PCS does not believe that a refresh capability will stifle customization or freeze technology in any way. It is concerned, however that the parties do not understand the likely consequences if a “refresh” capability is not included in E911 networks. Based upon its experience with the Rhode Island Phase II deployment, Sprint PCS believes that, without the “refresh” capability, a PSAP will not be receiving the caller’s true calculated location information in most instances.

The time to establish (or set-up) the voice portion of a 911 call generally ranges from three-to-five seconds after the call is dialed. At this time, Phase II-compliant call-taker equipment will ordinarily request available latitude/longitude (or “x,y coordinates”) from the ALI database. Available data from the Sprint PCS operational Phase II installation in Rhode Island indicate that the time needed to calculate the caller’s location ranges from eight to 20 seconds from the time the call is dialed depending upon the caller’s location. In most cases, then, the PSAP equipment will be requesting the location information from the ALI database *before* the caller’s true location is available from the carrier’s equipment.

If there is insufficient time to calculate the caller’s true location, the carrier’s equipment provides default location information that identifies the centroid of the transmitting cell site sector. The centroid of the sector is a point approximately in the middle of the sector; it is not the address of the cell site transmitter that is provided with Phase I. Accordingly, the information

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<sup>26</sup> See Sprint PCS Reconsideration Petition at 10-12.

<sup>27</sup> Public Safety Organizations Comments at 3-4.

that will be supplied to the ALI database in response to the initial query will generally be the default centroid information.

As a practical matter, *in the majority of cases, the PSAP will not receive the caller's true location because the caller's true calculated location will not be available when the ALI database first requests the information.* Put another way, the PSAP and carrier will have spent considerable time and resources to implement Phase II, but without an ALI upgrade that includes the refresh capability, the PSAP will rarely receive the caller's actual calculated location position.<sup>28</sup>

It is important to emphasize that this is not a situation where the PSAP will receive no location information on the first call attempt. Rather, in response to the first location query, the PSAP will receive Phase II information - a series of x,y coordinate digits in the latitude/longitude format. While in some cases, the data may be the caller's true calculated position, in most cases, it will be a default location associated with the cell sector centroid. Without the capabilities provided by the industry standard, J-STD-036, the PSAP may not be aware of whether it is receiving a true calculated location or a default location.

The industry standard supports two functionalities to address this issue: a "refresh" capability (so PSAPs can acquire the caller's calculated location when it becomes available) and the capability to forward a "confidence factor" (so the PSAP will know whether the x,y coordinates appearing on its screen represent a calculated location or a default location). If the Commission does not require a "refresh" capability to ensure that a PSAP receives calculated location data, it should then require that ALI databases be capable of transmitting a confidence factor. Without

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<sup>28</sup> Given the state of the new location technology, it would appear as a matter of law that a PSAP request for Phase II service without the "refresh" capability would not be a valid request – because under Rule 20.18(j) the PSAP "is [not] capable of receiving and utilizing the data elements associated with the service." While the FCC must, of course, consider its own rules and precedent in deciding issues, in this in-

either a refresh capability or a confidence factor, 911 call-takers could easily assume, erroneously, that the x,y coordinates appearing on their screen identifies the location of the caller when, in fact, the caller could be located miles away from the provided location. Sprint PCS submits that the Commission should discourage an arrangement whereby PSAPs mistakenly believe they are sending emergency personnel to the right location.

The Commission recently announced its intention to engage the services of Mr. Hatfield to lead an inquiry into wireless of E911 implementation,<sup>29</sup> and Sprint PCS has submitted a preliminary list of issues that Mr. Hatfield may wish to examine.<sup>30</sup> Sprint PCS urges the Commission to confirm the need for refresh capability based on the evidence before it. If the Commission determines that additional analysis is needed before it requires the refresh capability, it should charge Mr. Hatfield with pursuing this matter so it can have the benefits of his recommendations. Sprint PCS further joins the Public Safety Organizations' request that the Commission "open promptly and proceed with deliberate speed through the Hatfield inquiry."<sup>31</sup>

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stance Sprint PCS urges the FCC to focus primarily on the consequences to PSAPs and the calling public if PSAPs do not include a "refresh" capability in their E911 networks.

<sup>29</sup> See FCC News, "FCC Announces Dale Hatfield to Lead Inquiry of Technical and Operational Issues Affecting Deployment of Wireless Enhanced 911 Services" (Nov. 20, 2001).

<sup>30</sup> See Letter from Luisa L. Lancetti, Sprint PCS, to Thomas J. Sugrue, Chief, Wireless Bureau, Docket No. 94-102 (Jan. 4, 2002).

<sup>31</sup> Public Safety Organizations Comments, Docket No. 94-102, at 3 (Jan. 22, 2002).

**V. CONCLUSION**

For the foregoing reasons, Sprint PCS respectfully requests that the Commission expeditiously revise and clarify the *Richardson Order* as discussed above and in its November 30, 2001 reconsideration petition.

Respectfully submitted,

**SPRINT SPECTRUM L.P., d/b/a Sprint PCS**

A handwritten signature in black ink, appearing to read 'L. Lancetti', with a long horizontal line extending to the right.

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January 28, 2002

**CERTIFICATE OF SERVICE**

I, Jo-Ann Monroe, do hereby certify that on this 28<sup>th</sup> day of January 2002, copies of the foregoing "Sprint PCS Reply Comments in Support of its Petition for Reconsideration and Clarification" were served by facsimile and U.S. first-class mail, postage prepaid, to the following:

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